Claims:

1. An electric toothbrush, comprising:

a housing;

an electric motor connected to said housing, said electric motor having a motor output member for rotation about a motor output axis;

a first transmission linked to said motor output member, said first transmission to convert rotational movement from said motor output member into rotational reciprocating movement at a first average angular speed; and

a second transmission linked to said first transmission, said second transmission to convert rotational reciprocating movement from said first transmission into rotational reciprocating movement at a second average angular speed about a second transmission output axis that is parallel to said motor output axis and to drive an output member to reciprocate at said second average angular speed about said second transmission output axis.

2. An electric toothbrush as claimed in claim 1, wherein

said second transmission comprises a first gear member, said first gear member comprising a section of an internal gear connected to said first transmission, and a second gear member drivenly connected to said first gear member, said second gear member comprises a spur gear.

3. The electric toothbrush as claimed in claim 1, wherein said motor output member comprises a first gear, and said first transmission comprises:

a rotatable second gear member which mates with said first gear member;

an orbiting member attached to said second gear, to convert rotation of said second gear to orbital movement; and

a rotatable slotted member slidably connected to said orbiting member, to convert said orbital movement into rotational reciprocating movement at said first average angular speed.

4. The electric toothbrush as claimed in claim 1, wherein said output member comprises a brush head having an axis that is angled relative to said second transmission output axis.

5. The electric toothbrush as claimed in claim 1, wherein said second average angular speed is greater than said first average angular speed.

6. An electric toothbrush, comprising:

a housing;

an electric motor connected to said housing, said electric motor having a motor output member for rotation about a motor output axis;

a first transmission linked to said motor output member, to convert rotational movement from said motor output member into rotational reciprocating movement along a first angular sweep; and

a second transmission linked to said first transmission, said second transmission to convert rotational reciprocating movement from said first transmission into rotational reciprocating movement along a second angular sweep about a second transmission output axis that is parallel to said motor output axis and to drive an output member to reciprocate through said second angular sweep about said second transmission output axis.

7. The electric toothbrush as claimed in claim 6, wherein said output member comprises a brush head having an axis that is angled relative to said second transmission output axis.

8. The electric toothbrush as claimed in claim 6, wherein said second angular sweep is greater than said first angular sweep.

9. An electric toothbrush, comprising:

a housing;

an electric motor connected to said housing, said electric motor having a motor output member for rotation about a motor output axis;

a transmission linked to said motor output member, to convert rotational movement from said motor output member into rotational reciprocating movement along a first angular sweep;

a section of an internal gear, said section connected to said transmission, for rotational reciprocating movement at said first average angular sweep; and

a gear drivenly connected to said section for rotational reciprocating movement along a second angular sweep about a gear member axis that is parallel to said motor output axis and to drive an output member to reciprocate at said second average angular sweep about said gear member axis.

10. The electric toothbrush as claimed in claim 9, wherein said output member comprises a brush head having an axis that is angled relative to said gear member axis.